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TECHNICAL ASSISTANCE TEAM FOR EMERGENCY RESPONSE REMOVAL AND PREVENTION EPA CONTRACT 68-WO-0036

MEMORANDUM

TO:

Gerald Heston, OSC

Western Response Section (3HW32)

FROM:

Robert McGlade, TAT Region III

TDD#: 9410-154

PCS#: 1154

SUBJECT:

Boarhead Farms NPL Site Trip Report

DATE:

November 18, 1994

BACKGROUND

The Boarhead Farms Site is a partially wooded lot of approximately 113 acres located on Lonely Cottage Road in Upper Black Eddy, Bridgeton Township, Bucks County, PA. Roughly onethird of this 113-acres is low-lying wetlands with the surrounding area being somewhat hilly. A farmhouse, stables, and the former office of the Boarhead Corporation are located on the upland portion of the Site in a cleared area encompassing about one-fourth of the 113-acres. Two ponds are located in the central portion of the property, with the larger covering approximately 4 acres and the smaller approximately 3/4 of an acre. The topography of the Site slopes down and away from the ponds towards a swampy area located in the southeastern portion of the property. The Site has a history since the early 1970s of uncontrolled releases documented by the Pennsylvania Department of Environmental Resources (PADER) and the Bucks County Department of Health (BCDOH). On February 20, the BCDOH filed a Waste Discharge Inspection Report documenting drum burial operations being conducted on the Site. In March of 1976, the owner of the Site was found guilty of nine separate violations of the Pennsylvania Clean Streams Law. September of 1976, 34 persons were evacuated from the surrounding area because of a sulfuric acid cloud resulting from a leaking tanker parked on the Boarhead property.

As a result of the identification of 28 magnetic anomalies onsite and the strong suspicion that buried drums were present, the U.S. EPA Remedial Branch Project Manager requested the assistance of the Removal Branch in investigating these magnetic anomalies.

On February 24, 1992 U.S. EPA Region III Administrator Edwin B. Erickson approved CERCLA funds to begin Removal efforts at the Site. After an extensive magnetometer survey, the excavation of identified anomalies began. Approximately 2,500 drums and 6,600 cubic yards of soil were excavated and transported off-site for disposal between June 18, 1992, and September 17, 1993.

The U.S. EPA Remedial Branch conducted an ecological assessment on-site between July 1992 and June 1993. Remedial contractors collected soil, sediment, surface water, and residential well samples, and conducted wetland impact studies. To date, the ecological assessment has indicated that on-site contamination is isolated to areas of drum burial. Based on local residential well analyses, there is no indication that local residential drinking water has been affected by the Site.

In August and September of 1993, the U.S. EPA Remedial Branch drilled twenty-three groundwater monitoring wells on- and off-site. Field monitoring instruments indicated that two of these wells, located in the central portion of the Site, may have been contaminated. The U.S. EPA Remedial Branch requested the assistance of the Removal Branch in sampling these wells for quick analytical turnaround. On September 10, 1993, OSC Matlock and the Region III Technical Assistance Team (TAT) sampled six wells on- and off-site. Two of these wells were the on-site wells suspected to be contaminated and four of these wells were randomly chosen wells on- and off-site.

The results of the September 10 sampling event indicated that significant groundwater contamination existed on-site. These analytical results prompted the U.S. EPA to begin an Engineering Evaluation/Cost Analysis (EE/CA) for groundwater treatment at the Boarhead Farms Site to prevent the migration of this contamination into local residential wells. At the direction of the U.S. EPA, TAT subcontracted B.L. Meyers Brothers, Inc. to drill 15 monitoring/extraction wells on-site to depths up to 150 feet.

Upon completion of the drilling of these wells, the United States Department of the Interior, Geological Survey (USGS) conducted geophysical, camera, and pump testing of these wells to identify the subsurface geophysical characteristics of the Site. During the USGS pump testing operations, TAT collected two water samples for volatile organic compound analysis from each well, one at the commencement of the pump test and one at the completion of the pump test. In addition, one sample was collected from the holding tank containing the USGS pump test water from all of the extraction wells and was analyzed for Volatile Organic Compounds, Pesticide/PCB, Base/Neutral/Acid (Semi-Volatile Organic Compounds), Total Metals, and Cyanide.

ACTIONS TAKEN

The USGS targeted seven of the best producing extraction wells on the Site for 4 or 8 hour pump tests. These wells were EW-2, EW-6, EW-8, EW-9, EW-10, EW-11, and EW-13. During these pump tests, TAT collected water samples for VOC analysis approximately 30 minutes after commencement of the pump test (to allow for purging of stagnant water) and approximately 30 minutes prior to completion of the pump test at each well. These samples were numbered as EW-1#A and EW-#B, respectively.

EW-2 was pumped on 27 October, 1994 and was sampled at 1150 (EW-2A) and 1448 (EW-2B). The pump rate averaged an estimated 1.00 GPM, and an estimated total of 178 gallons were pumped from the well between the two samples. The deviation of analytical results between EW-2A and EW-2B for those compounds detected is as follows: 1,2-Dichloroethene (total) increased 26%, 1,1,1-Trichloroethane increased 41%, and Trichloroethene increased 22%. Benzene was not detected in EW-2A, but was detected in EW-2B at an estimated concentration of 28 ug/L.

EW-6 was pumped on 26 October, 1994 and was sampled at 0940 (EW-6A) and 1615 (EW-6B). The pump rate averaged 6.00 GPM, and an estimated total of 2,370 gallons were pumped from the well between the two samples. The deviation of analytical results between EW-6A and EW-6B for those compounds detected is as follows: 1,1-Dichloroethene increased 45%, 1,1-Dichloroethane increased 27%, 1,2-Dichloroethene (total) increased 24%, 1,1,1-Trichloroethane increased 42%, Trichloroethene increased 35%, Benzene increased 39%, and Tetrachloroethene increased 48%.

EW-8 was pumped on 24 October, 1994 and was sampled at 0940 (EW-8A) and 1500 (EW-8B). The pump rate averaged 9.03 GPM, and an estimated total of 2,889 gallons were pumped from the well between the two samples. The deviation of analytical results between EW-8A and EW-8B for those compounds detected is as follows: 1,1-Dichloroethane changed <=10%, 1,2-Dichloroethene (total) changed <=10%, 1,1,1-Trichloroethane decreased 11%, Trichloroethene changed <=10%, and Tetrachloroethene changed <=10%.

EW-9 was pumped on 19 October, 1994 and was sampled at 1000 (EW-9A) and 1048 (EW-9B). The pump rate averaged 2.07 GPM, and an estimated total of 99 gallons were pumped from the well between the two samples. This well was pumped dry at approximately 1045, and therefore the pump test could not be completed. The deviation of analytical results between EW-9A and EW-9B for those compounds detected is as follows: 1,1-Dichloroethane decreased 21%, 1,2-Dichloroethene (total) changed <=10%, 1,1,1-Trichloroethane increased 18%, Trichloroethene changed <=10%, and Tetrachloroethene changed <=10%.

EW-10 was pumped on 18 October, 1994 and was sampled at 0920 (EW-10A) and 1200 (EW-10B). The pump rate averaged 3.25 gallons per minute (GPM), and an estimated total of 520 gallons were pumped from the well between the two samples. The deviation of analytical results between EW-10A and EW-10B for those compounds detected (1,1-Dichloroethane, 1,2-Dichloroethene total, 1,1,1-Trichloroethane, Trichloroethene, and tetrachloroethene) is 10% or less.

EW-11 was pumped on 28 October, 1994 and was sampled at 0900 (EW-11A) and 1100 (EW-11B). The pump rate averaged an estimated 1.00 GPM, and an estimated total of 120 gallons were pumped from the well between the two samples. The deviation of analytical results between EW-11A and EW-11B for those compounds detected is as follows: 1,1-Dichloroethene increased 50%, 1,1-Dichloroethane decreased 56%, 1,2-Dichloroethene (total) decreased 30%, 1,1,1-Trichloroethane increased 77%, Trichloroethene increased 11%, 1,2-Trichloroethane decreased 19%, and Tetrachloroethene changed <=10%.

EW-13 was pumped on 20 October, 1994 and was sampled at 0955 (EW-13A) and 1230 (EW-13B). The pump rate averaged an estimated 2.50 GPM, and an estimated total of 387 gallons were pumped from the well between the two samples. The deviation of analytical results between EW-13A and EW-13B for those compounds detected is as follows: 1,1-Dichloroethene increased 200%, 1,1-Dichloroethane increased 19%, 1,2-Dichloroethene (total) changed <=10%, 1,1,1 Trichloroethane increased 114%, Trichloroethene increased 83%, and Toluene changed <=10%.

FUTURE PLANS

The information contained in this report and its attachment may be used as an aid in the selection of a remediation option for the groundwater contamination at the Site.

Upon receipt of analytical results from the laboratory for the hoilding tank sample, an analytical review and summary of that sample's analysis will be completed by TAT.

Attachments:

- Table 1
- Extraction Well Analytical Data Summary
- Extraction Well Data Review Report

TABLE 1.

The following table lists analytical results for the

The following table lists analytical results for those compounds which exceeded either the Removal Action Level (RAL) or the Maximum Contaminant Level (MCL) and the respective samples.

SAMPLE NUMBER	COMPOUNDS EXCEEDING THE MCL	COMPOUNDS EXCEEDING THE RAL
EW-2A	1,1,1-TRICHLOROETHANE TRICHLOROETHYLENE	TRICHLOROETHYLENE
EW-2B	1,1,1-TRICHLOROETHANE BENZENE TRICHLOROETHYLENE	TRICHLOROETHYLENE
EW-6A	1,1-DICHLOROETHENE 1,1,1-TRICHLOROETHANE BENZENE TETRACHLOROETHYLENE TRICHLOROETHYLENE	TRICHLOROETHYLENE .
EW-6B	1,1-DICHLOROETHENE 1,1,1-TRICHLOROETHANE 1,2-DICHLOROETHENE BENZENE TRICHLOROETHYLENE	TRICHLOROETHYLENE
EW-8A	1,1,1-TRICHLOROETHANE 1,2-DICHLOROETHENE TETRACHLOROETHYLENE TRICHLOROETHYLENE	1,2-DICHLROETHENE TRICHLOROETHYLENE
EW-8B	1,1,1-TRICHLOROETHANE 1,2-DICHLOROETHENE TETRACHLOROETHYLENE TRICHLOROETHYLENE	1,2-DICHLOROETHENE TRICHLORETHYLENE
EW-9A	1,2-DICHLOROETHENE TETRACHLOROETHYLENE TRICHLOROETHYLENE	TRICHLOROETHYLENE
EW-9B	1,2-DICHLOROETHENE TETRACHLOROETHYLENE TRICHLOROETHYLENE	TRICHLOROETHYLENE
EW-10A	TETRACHLOROETHYLENE TRICHLOROETHYLENE	
EW-10B	TETRACHLOROETHYLENE TRICHLOROETHYLENE	

EW-11B	1,1-DICHLOROETHENE 1,1,1-TRICHLOROETHANE 1,1,2-TRICHLOROETHANE 1,2-DICHLOROETHENE TETRACHLOROETHYLENE TRICHLOROETHYLENE	1,1-DICHLOROETHENE 1,1,2-TRICHLOROETHANE TETRACHLOROETHYLENE TRICHLOROETHYLENE
ĖW−13A	1,1-DICHLOROETHENE 1,1,1-TRICHLOROETHANE TRICHLOROETHYLENE	TRICHLOROETHYLENE
EW-13B	1,1-DICHLOROETHENE TRICHLOROETHYLENE 1,1,1-TRICHLOROETHANE	1,1-DICHLOROETHENE TRICHLOROETHYLENE

The following lists the MCL and RAL for each of the above compounds:

COMPOUND	MCL (ug/L)	RAL (ug/L)
1,1,1-Trichloroethane	200	1,000
1,1,2-Trichloroethane	5	30
Benzene	5	100
1,1-Dichloroethene	7	70
1,2-Dichloroethene (cis-)	70	400
Tetrachloroethylene	5	70
Trichloroethylene	5	300

^{1.2-}Dichloroethene is reported as "total" in the analytical report (both cis- and trans- isomers). The RAL and MCI, for the cis- isomer of this compound is listed here, since these are the most conservative values.

SAMPLE NO.

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VOL	ATILE	ORGA	NICS	ANA	LYSIS	DATA	SHEET

	· ·	9429345V
Contract:		EW-2A

Lab Name. ENGL ANA	ETTICAL	Contract:	<u> </u>	}
Project No.:	Site:	Location:	Group:	
Matrix: (soil/water)	WATER	Lab	Sample ID: 9429345V	
Sample wt/vol:	0.500 (g/mL) ML	·	Lab File ID: C4261.D	
Level: (low/med)	LOW	Dat	e Received: 10/31/94	
% Moisture: not dec.	NA	Dat	te Analyzed: 11/1/94	
GC Column: DB-624 X 7	5M ID: 0.53	(mm) Dil	ution Factor: 1.0	
Soil Extract Volume:	(uL)	Soil Aliq	quot Volume: (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	100	U
74-83-9	Bromomethane	100	Ū
75-01-4	Vinyl chloride	100	Ū
75-00-3	Chloroethane	100	Ü
75-09-2	Methylene chloride	48	JB
67-64-1	Acetone	100	Ū
75-15-0	Carbon disulfide	50	U
75-35-4	1,1-Dichloroethene	50	U
75-34-3	1,1-Dichloroethane	33	J
540-59-0	1,2-Dichloroethene (total)	39	J
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U
78-93-3	2-Butanone	100	U
71-55-6	1,1,1-Trichloroethane	240	
56-23-5	Carbon tetrachloride	. 50	ប
75-27-4	Bromodichloromethane	50	Ū
78-87-5	1,2-Dichloropropane	50	Ū
10061-01-5	cis-1,3-Dichloropropene	50	U
79-01-6	Trichloroethene	1800	
124-48-1	Dibromochloromethane	50	U
79-00-5	1,1,2-Trichloroethane	50	Ū
71-43-2	Benzene	50	U
10061-02-6	trans-1,3-Dichloropropene	50	ប
75-25-2	Bromoform	50	U
108-10-1	4-Methyl-2-pentanone	100	U
591-78-6	2-Hexanone	100	U
127-18-4	Tetrachloroethene	50	U
79-34-5	1,1,2,2-Tetrachloroethane	50	U
108-88-3	Toluene	50	U
108-90-7	Chlorobenzene	50	U
100-41-4	Ethylbenzene	50	Ū
100-42-5	Styrene	50	U
1330-20-7	Xylene (total)	50	U

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

9429345V E(U-2A 021

Lab Name: EMSL ANA	LYTICAL		Contract:			
Project No.		Site:	Location:		Group:	
Matrix: (soil/water)	WATER	•		Lab Sample ID:	9429345V	
Sample wt/vol:	0.500	(g/mL) ML		Lab File ID	: C4261.D	
Level: (low/med)	LOW	•		Date Received:	10/31/94	
% Moisture: not dec.	NA			Date Analyzed:	11/1/94	
GC Column: DB-6	24 X 75M	ID: <u>0.53</u>	(mm)	Dilution Factor:	1.0	
Soil Extract Volume:		(uL)		Soil Aliquot Volume:	(ı	ıL)
Number TICs found:	0		Concentrati (ug/L or			

·		(ag/2 of ag/Rg)		
CAS Number	Compound Name	RT	Est. Conc.	Q
1.	NONE FOUND			
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SAMPLE NO.

Lab File ID: C4262.D

9429346V

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Lab Name:	EMSL ANALYTICA	L	Contract:	- 	EW-2B	_
Project No.:		Site:	Location:	-	Group:	_
Matrix: (soil	/water) WATE	<u> </u>		Lab Sample ID:	9429346V	

Level: (low/med) LOW Date Received: 10/31/94

0.500 (g/mL) ML

Sample wt/vol:

% Moisture: not dec. NA . Date Analyzed: 11/2/94

GC Column: DB-624 X 75M ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:

		Concentration Units:	
CAS No.	Compound	(ug/L or ug/Kg) ug/L	. Q
74-87-3	Chloromethane	100	u ·
74-83-9	Bromomethane	100	U
75-01-4	Vinyl chloride	100	Ü
75-00-3	Chloroethane	100	U
75-09-2	Methylene chloride	50	JB
67-64-1	Acetone	100	Ū
75-15-0	Carbon disulfide	50	Ū
75-35-4	1,1-Dichloroethene	50	Ū
75-34-3	1,1-Dichloroethane	50	Ū
540-59-0	1,2-Dichloroethene (total)	53	
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U
78-93-3	2-Butanone	100	U
71-55-6	1,1,1-Trichloroethane	340	
56-23-5	Carbon tetrachloride	50	U
75-27-4	Bromodichloromethane	50	U
78-87-5	1,2-Dichloropropane	50	U
10061-01-5	cis-1,3-Dichloropropene	50	Ū
79-01-6	Trichloroethene	2200	
124-48-1	Dibromochloromethane	50	Ū
79-00-5	1,1,2-Trichloroethane	50	U
71-43-2	Benzene	28	J
10061-02-6	trans-1,3-Dichloropropene	50	U
75-25-2	Bromoform	50	Ū
108-10-1	4-Methyl-2-pentanone	100	U
591-78-6	2-Hexanone	100	Ū
127-18-4	Tetrachloroethene	50	U
79-34-5	1,1,2,2-Tetrachloroethane	50	U
108-88-3	Toluene	50 .	Ū
108-90-7	Chlorobenzene	50	U
100-41-4	Ethylbenzene	50	U
100-42-5	Styrene	50	ប
1330-20-7	Xylene (total)	50	ប

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

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Lab Name: EMSL ANA	LYTICAL		Contract:		<u>Cur-</u>	<u> </u>
Project No.		Site:	Location:		Group:	
Matrix: (soil/water)	WATER			Lab Sample ID:	9429346V	
Sample wt/vol:	0.500	_(g/mL) <u>ML</u>	_	Lab File ID	: C4262.D	
Level: · (low/med)	LOW			Date Received:	10/31/94	
% Moisture: not dec.	NA	_		Date Analyzed:	11/2/94	
GC Column: DB-6	24 X 75M	ID: 0.53	_(m m)	Dilution Factor:	1.0	
Soil Extract Volume:		_(uL)		Soil Aliquot Volume:		(uL)
Number TICs found:	0		Concentration (ug/L or			

Number TICs found:	0		or ug/Kg)	ug/L	
[C.	AS Number	Compound Name	RT	Est. Conc.	Q
	1.	NONE FOUND			
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Lab Name: EMSL ANA	LYTICAL	Contract:	9 429349V Ew-6A
Project No.:	Site:	Location:	Group:
Matrix: (soil/water)	WATER	Lab Sample ID:	9429349V
Sample wt/vol:	1.0 (g/mL) ML	Lab File ID	: C4279.D
Level: (low/med)	LOW	Date Received:	10/31/94
% Moisture: not dec.	NA	Date Analyzed:	11/3/94
GC Column: DB-624 X 75	5M ID: 0.53	(mm) Dilution Factor:	1.0
Soil Extract Volume:	(uL)	Soil Aliquot Volume	:(uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	. 50	Ú
74-83-9	Bromomethane	50	U
75-01-4	Vinyl chloride	50	U
75-00-3	Chloroethane	50	Ü
75-09-2	Methylene chloride	34	
67-64-1	Acetone	50	U
75-15-0	Carbon disulfide	25	Ū·
75-35-4	1,1-Dichloroethene	24	J
75-34-3	1,1-Dichloroethane	18	J
540-59-0	1,2-Dichloroethene (total)	57	
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	Ū
78-93-3	2-Butanone	50	U
71-55-6	1,1,1-Trichloroethane	210	
56-23-5	Carbon tetrachloride	25	U
75-27-4	Bromodichloromethane	25.	U
78-87-5	1,2-Dichloropropane	25	U
10061-01-5	cis-1,3-Dichloropropene	25	U
79-01-6	Trichloroethene	370	
124-48-1	Dibromochloromethane	25	U
79-00-5	1,1,2-Trichloroethane	25	U
71-43-2	Велгеле	28	
10061-02-6	trans-1,3-Dichloropropene	25	Ü
75-25-2	Bromoform	25	U
108-10-1	4-Methyl-2-pentanone	50	U
591-78-6	2-Hexanone	50	U
127-18-4	Tetrachloroethene	41	
79-34-5	1,1,2,2-Tetrachloroethane	25	U
108-88-3	Toluene	25	U
108-90-7	Chlorobenzene	25	ប
100-41-4	Ethylbenzene	25	ប
100-42-5	Styrene	25	U
1330-20-7	Xylene (total)	25	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

9429349V Ew-6A

Lab Name: EMSL ANA	LYTICAL	Contrac	et:	
Project No.		Site: Location	n: Group:	
Matrix: (soil/water)	WATER	_	Lab Sample ID: 9429349V	
Sample wt/vol:	1.0	(g/mL) ML	Lab File ID: C4279.D	·
Level: (low/med)	LOW	_	Date Received: 10/31/94	
% Moisture: not dec.	NA	_	Date Analyzed: 11/3/94	
GC Column: DB-6	24 X 75M	ID: 0.53 (mm)	Dilution Factor: 1.0	
Soil Extract Volume:		_(uL)	Soil Aliquot Volume: (uL)	
Number TICs found:	0		ation Units: or ug/Kg) ug/L	

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CAS Number	Compound Name	RT	Est. Conc.	Q	
1.	NONE FOUND				
2.					
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Sample No.

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9429350V	
=(1)-/-a	

Lab Name: EMSL ANA	LYTICAL	Contract:	EW-68
Project No.:	Site:	Location:	Group:
Matrix: (soil/water)	WATER		Lab Sample ID: 9429350V
Sample wt/vol:	1.0 (g/mL) ML	•	Lab File ID: C4280.D
Levei: (low/med)	LOW		Date Received: 10/31/94
% Moisture: not dec.	NA		Date Analyzed: 11/3/94
GC Column: DB-624 X 7	5M ID: 0.53	(mm)	Dilution Factor: 1.0
Soil Extract Volume:	(uL)	Soil	Aliquot Volume: (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	· 50	Ü
74-83-9	Bromomethane	50	U
75-01-4	Vinyl chloride	50	U
75-00-3	Chloroethane	50	U
75-09-2	Methylene chloride	31	
67-64-1	Acetone	50	U
75-15-0	Carbon disulfide	25	U
75-35-4	1,1-Dichloroethene	35	
75-34-3	1,1-Dichloroethane	23	J
54 0- 59-0	1,2-Dichloroethene (total)	71	
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	50	U
71-55-6	1,1,1-Trichloroethane	300	
56-23-5	Carbon tetrachloride	25	U
75-27-4	Bromodichloromethane	25	U
78-87-5	1,2-Dichloropropane	25	Ū.
10061-01-5	cis-1,3-Dichloropropene	25	U
79-01-6	Trichloroethene	500	
124-48-1	Dibromochloromethane	25	U
79-00-5	1,1,2-Trichloroethane	25	Ū
71-43-2	Benzene	39	
10061-02-6	trans-1,3-Dichloropropene	25	U
75-25-2	Bromoform	25	U
108-10-1	4-Methyl-2-pentanone	50	U
591-78-6	2-Hexanone	50	ប
127-18-4	Tetrachioroethene	61	
79-34-5	1,1,2,2-Tetrachloroethane	25	U
108-88-3	Toluene	25	Ü
108-90-7	Chlorobenzene	25	Ŭ
100-41-4	Ethylbenzene	25	Ū
100-42-5	Styrene	25	U
1330-20-7	Xylene (total)	25	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

031

9429350V EW-6B

Lab Name: EMSL ANA	LYTICAL	Contrac	t:	
Project No.		Site: Locatio	n: Gr	oup:
Matrix: (soil/water)	WATER	_	Lab Sample ID: 94293	350V
Sample wt/vol:	1.0	(g/mL) ML	Lab File ID: C428	0.D
Level: (low/med)	LOW	_	Date Received: 10/3	1/94
% Moisture: not dec.	NA	_	Date Analyzed: 11/3	/94
GC Column: DB-6	24 X 75M	ID: 0.53 (mm)	Dilution Factor: 1	.0
Soil Extract Volume:		(uL)	Soil Aliquot Volume:	(uL)
Number TICs found:	0		ation Units: or ug/Kg) ug/L	

CAS Number			-5.2		
Cito Hannot	Compound Name	RT	Est. Conc.	Q ,	
1.	NONE FOUND				
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SAMPLE NO.

9429133V

016

Lab Name: EMSL ANALYTICAL Contract: EW-SA Site: Project No.: Location: Group: WATER Lab Sample ID: 9429133V Matrix: (soil/water) 0.250 (g/mL) ML Sample wt/vol: Lab File ID: C4271.D Date Received: 10/25/94 LOW

NA % Moisture: not dec. Date Analyzed: 11/3/94

Level: (low/med)

GC Column: DB-624 X 75M ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:

Concentration Units:				
CAS No.	Compound	(ug/L or ug/Kg) ug/L	Q	
74-87-3	Chloromethane	. 200	ט	
74-83-9	Bromomethane	200	U	
75-01-4	Vinyl chloride	200	Ū	
75-00-3	Chloroethane	200	ប	
75-09-2	Methylene chloride	100	Ū	
67-64-1	Acetone	200	U	
75-15-0	Carbon disulfide	100	Ü	
75-35-4	1,1-Dichloroethene	100	U	
75-34-3	I,I-Dichloroethane	55	J	
540-59-0	1,2-Dichloroethene (total)	540		
67-66-3	Chloroform	100	U	
107-06-2	1,2-Dichloroethane	100	U	
78-93-3	2-Butanone	200	U	
71-55-6	1,1,1-Trichloroethane	350		
56-23-5	Carbon tetrachloride	100	U	
75-27-4	Bromodichloromethane	100	บ	
78-87-5	1,2-Dichloropropane	100	. ប	
10061-01-5	cis-1,3-Dichloropropene	100	U	
79-01-6	Trichloroethene	3200		
124-48-1	Dibromochloromethane	100	U	
79-00-5	1,1,2-Trichloroethane	100	U	
71-43-2	Benzene	100	ប	
10061-02-6	trans-1.3-Dichloropropene	100	ប	
75-25-2	Bromoform	100	U	
108-10-1	4-Methyl-2-pentanone	200	U	
591-78-6	2-Hexanone	200	ប	
127-18-4	Tetrachloroethene	46	j	
79-34-5	1,1,2,2-Tetrachloroethane	100	Ū	
108-88-3	Toluene	100	ប	
108-90-7	Chlorobenzene	100	U	
100-41-4	Ethylbenzene	100	U	
100-42-5	Styrene	100	ប	
1330-20-7	Xylene (total)	100	Ū	

1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

017

9429133V €W-8A

Lab Name: EMSL ANA	ALYTICAL		Contract:	
Project No.		Site:	Location:	Group:
Matrix: (soil/water)	WATER	_	Lab Sample ID:	9429133V
Sample wt/vol:	0.250	(g/mL) ML	Lab File ID:	C4271.D
Level: (low/med)	LOW	_	Date Received:	10/25/94
% Moisture: not dec.	NA	_	Date Analyzed:	11/3/94
GC Column: DB-6	24 X 75M	ID: 0.53 (m	m) Dilution Factor:	1.0
Soil Extract Volume:		_(uL)	Soil Aliquot Volume:	(uL)
Number TICs found:	0		oncentration Units:	

		(dg/D of dg/Ng)					
CAS Number	Compound Name	RT	Est. Conc.	Q			
1.	NONE FOUND						
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Lab Name:	EMSL ANALYTICAL	· · · · · · · · · · · · · · · · · · ·	Contract:	4-	9429134V EW-SB
Project No.:		Site:	Location:		Group:

Matrix: (soil/water) WATER Lab Sample ID: 9429134V

0.250 (g/mL) ML Sample wt/vol: Lab File ID: C4274.D

LOW Level: (low/med) Date Received: 10/25/94

NA Date Analyzed: 11/3/94 % Moisture: not dec.

GC Column: DB-624 X 75M ID: 0.53 (mm) Dilution Factor: 1.0

(uL) Soil Extract Volume: Soil Aliquot Volume: (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	200	U
74-83-9	Bromomethane	200	U
75-01-4	Vinyl chloride	200	U
75-00-3	Chloroethane	200	U
75-09-2	Methylene chloride	100	U
67-64-1	Acetone	200	U
75-15-0	Carbon disulfide	100	U
75-35-4	1,1-Dichloroethene	100	U
75-34-3	1,1-Dichloroethane	56	J
540-59-0	1,2-Dichloroethene (total)	550	
67-66-3	Chloroform	100	U
107-06-2	1,2-Dichloroethane	100	U
78-93-3	2-Butanone	200	U
71-55-6	1,1,1-Trichloroethane	310	
56-23-5	Carbon tetrachloride	100	U
75-27-4	Bromodichloromethane	100	U
78-87-5	1,2-Dichloropropane	100	U
10061-01-5	cis-1.3-Dichloropropene	100	U
79-01-6	Trichloroethene	3200	
124-48-1	Dibromochloromethane	. 100	U
79-00-5	1,1,2-Trichloroethane	100	U
71-43-2	Benzene	F00	ប
10061-02-6	trans-1,3-Dichloropropene	100	Ū
75-25-2	Bromoform	100	Ü
108-10-1	4-Methyl-2-pentanone	200	Ū
591-78-6	2-Hexanone	200	U
127-18-4	Tetrachloroethene	42	J
79-34-5	1,1,2,2-Tetrachloroethane	100	Ū
108-88-3	Toluene	100	ប
108-90-7	Chlorobenzene	100	Ü
100-41-4	Ethylbenzene	100	Ü
100-42-5	Styrene	100	U
1330-20-7	Xylene (total)	100	U

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.	 1	O
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9429134V モロ・Sる		

Lab Name: EMSL ANA	ALYTICAL	Contr	ract:
Project No.		Site: Locat	tion: Group:
Matrix: (soil/water)	WATER	-	Lab Sample ID: 9429134V
Sample wt/vol:	0.250	_(g/mL) <u>ML</u>	Lab File ID: C4274.D
Level: (low/med)	LOW	_	Date Received: 10/25/94
% Moisture: not dec.	NA	-	Date Analyzed: 11/3/94
GC Column: DB-6	524 X 75M	ID: 0.53 (mm)	Dilution Factor: 1.0
Soil Extract Volume:		_(uL)	Soil Aliquot Volume: (uL)
Number TICs found:	0		uration Units: L or ug/Kg) ug/L

	(45/201	(42, 5 0, 45, 15)		
CAS Number	Compound Name	RT	Est. Conc.	Q
1.	NONE FOUND			
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VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

9428402V EUC SA

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Lab Name: EMSL ANA	LYTICAL		Contract:		
Project No.		Site:	Location:		Group:
Matrix: (soil/water)	WATER			Lab Sample ID:	9428402V
Sample wt/vol:	0.500	(g/mL) ML	-	Lab File ID:	C4255.D
Level: (low/med)	LOW			Date Received:	10/20/94
% Moisture: not dec.	NA		•	Date Analyzed:	11/1/94
GC Column: DB-6	24 X 75M	ID: 0.53	(mm)	Dilution Factor:	1.0
Soil Extract Volume:		_(uL)	Soil	l Aliquot Volume:	(uL)
Number TICs found:	0		Concentration U		

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	NONE FOUND			
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SAMPLE NO

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9428402V

Lab Name:	EMSL ANALYTICAL		Contract:		FLE- VA
Project No.:		Site:	Location:		Group:
Matrix: (enil	(mater) WATER			I sh Samula ID.	043940317

Matrix: (soil/water) WATER Lab Sample ID: 9428402V

Sample wt. vol: 0.500 (g/mL) ML Lab File ID: C4255.D

Level: (low/med) LOW Date Received: 10/20/94

% Moisture: not dec. NA Date Analyzed: 11/1/94

GC Column: DB-624 X 75M ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	· 100	U
74-83-9	Bromomethane	100	U
75-01-4	Vinyl chloride	100	U
75-00-3	Chloroethane	100	U
75-09-2	Methylene chloride	45	JB
67-64-1	Acetone	100	U
75-15-0	Carbon disulfide	50	U
75-35-4	1,1-Dichloroethene	50	บ
75-34 - 3	1,1-Dichloroethane	46	J
540-59-0	1,2-Dichloroethene (total)	230	
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	Ū
78-93-3	2-Butanone	100	U
71-55-6	1,1,1-Trichloroethane	160	
56-23-5	Carbon tetrachloride	50	U
75-27-4	Bromodichloromethane	50	U
78-87-5	1,2-Dichloropropane	50	U
10061-01-5	cis-1,3-Dichloropropene	50	U
79-01-6	Trichloroethene	2000	
124-48-1	Dibromochloromethane	50	U
79-00-5	1,1,2-Trichloroethane	50	Ŭ
71-43-2	Benzene	50	Ü
10061-02-6	trans-1,3-Dichloropropene	50	Ü
75-25-2	Bromoform	50	U
108-10-1	4-Methyl-2-pentanone	100	U
591-78-6	2-Hexanone	100	U
127-18-4	Tetrachloroethene-	25	J
79-34-5	1.1,2,2-Tetrachloroethane	50	U
108-88-3	Toluene	50	U
108-90-7	Chlorobenzene	50	Ŭ
100-41-4	Ethylbenzene	50	Ŭ
100-42-5	Styrene	50	Ŭ
1330-20-7	Xylene (total)	50	Ü

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

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9428493V ≨13-41B

T T NT PROF ANTAS	T APPERAT A T			
Lab Name: EMSL ANA	LYTICAL	Contract	•	
Project No.		Site: Location	1:	Group:
Matrix: (soil/water)	WATER	-Nim	Lab Sample ID:	9428403V
Sample wt/vol:	0.500	(g/mL) ML	Lab File ID:	C4256.D
Level: (low/med)	LOW	-	Date Received:	10/20/94
% Moisture: not dec.	ÑA	<i>.</i>	Date Analyzed:	11/1/94
GC Column: DB-62	4 X 75M	ID: 0.53 (mm)	Dilution Factor:	1.0
Soil Extract Volume:		_(uL)	Soil Aliquot Volume:	(uL)
Number TICs found:	0		tion Units: r ug/Kg) ug/L	

Compound Name	RT		
	KI	Est. Conc.	. Q
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94 2840 3V
EW-9B

Lab Name: EMSL ANA	LYTICAL	Contract:	Ew-cig
Project No.:	Site:	Location:	Group:
Matrix: (soil/water)	WATER	Lab Sample ID	: 9428403V
Sample wt/vol:	0.500 (g/mL) ML	Lab File II	D: C4256.D
Level: (low/med)	LOW	Date Received	: 10/20/94
% Moisture: not dec.	NA	Date Analyzed	: 11/1/94
GC Column: DB-624 X 7	5M ID: 0.53	(mm) Dilution Factor	r: <u>1.0</u>
Soil Extract Volume:	(uL)	Soil Aliquot Volume	e: (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	100	U
74-83-9	Bromomethane	100	U
75-01-4	Vinyi chloride	100	U
75-00-3	Chloroethane	100	U
75-09-2	Methylene chloride	46	JB
57-64-1	Acetone	100	U
75-15-0	Carbon disulfide	50	U
75-35-4	1,1-Dichloroethene	50	U
75-34-3	1,1-Dichloroethane	36	J
540-59-0	1,2-Dichloroethene (total)	240	
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U
78-93-3	2-Butanone	100	U
71-55-6	1,1,1-Trichloroethane	190	
56-23-5	Carbon tetrachloride	. 50	U
75-27-4	Bromodichloromethane	50	Ū
78-87-5	1,2-Dichloropropane	50	Ū
10061-01-5	cis-1,3-Dichloropropene	50	Ū
79-01-6	Trichloroethene	1900	
124-48-1	Dibromochloromethane	. 50	U
79-00-5	1,1,2-Trichloroethane	50	U
71-43-2	Benzene	50	ប
10061-02-6	trans-1,3-Dichloropropene	50	ប
75-25-2	Bromoform	50	U
108-10-1	4-Methyl-2-pentanone	100	U
591-78-6	2-Hexanone	100	Ü
127-18-4	Tetrachloroethene	23	J
79-34-5	1,1,2,2-Tetrachloroethane	50	U
108-88-3	Toluene	50	U
108-90-7	Chlorobenzene	50	U
100-41-4	Ethylbenzene	50	U
100-42-5	Styrene	50	U
1330-20-7	Xylene (total)	50	Ū

SAMPLE NO.

Lau Ivaille.	LABE ANALT HEAL	· Cuttract:	 ECC -104
Project No.:	Site:	Location:	Group.

Matrix: (soil/water) WATER Lab Sample ID: 9428400V

Sample wt/vol: 5 (g/mL) ML Lab File ID: C4251.D

EMSE ANIAE VTICAL

Level: (low/med) LOW Date Received: 10/20/94

% Moisture: not dec. NA Date Analyzed: 11/1/94

GC Column: DB-624 X 75M ID: 0.53 (mm) Dilution Factor: 1.0

Soil Aliquot Volume: Soil Extract Volume: (uL) (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/L Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	Ū
75-01-4	Vinyl chloride	10	Ü
7 5- 00-3	Chloroethane	10	Ū
75-09-2	Methylene chloride	6	В
67-64-1	Acetone	10	Ū
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	4	J
7 5-3 4-3	1,1-Dichloroethane	99	
540-59-0	1,2-Dichloroethene (total)	52	
67-66-3	Chloroform	5	Ŭ
107-06-2	1,2-Dichloroethane	5	Ŭ
78-93-3	2-Butanone	10	Ū
71-55-6	1,1,1-Trichloroethane	26	
56-23-5	Carbon tetrachloride	5	U
75-27-4	Bromodichloromethane	. 5	Ū
78 - 87 <i>-</i> 5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	Ū
79-01-6	Trichloroethene	36	
124-48-1	Dibromochloromethane	5	· U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	Ŭ
591-78-6	2-Нехапопе	10	U
127-18-4	Tetrachloroethene	7	
79-34-5	1,1,2,2-Tetrachloroethane	5	Ŭ
108-88-3	Toluene	5	Ŭ
108-90-7	Chlorobenzene	5	
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	Ŭ
1330-20-7	Xylene (totai)	5	U

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO

005

9428400V Eໝ- 10A

Lab Name: EMSL ANA	ALYTICAL		Contract:			
Project No.		Site:	Location:		Group:	
Matrix: (soil/water)	WATER	•••		Lab Sample ID:	9428400V	
Sample wt/vol:	5.0	(g/mL) ML	-	Lab File ID	: C4251.D	
Level: (low/med)	LOW	_		Date Received:	10/20/94	
% Moisture: not dec.	NA	_		Date Analyzed:	11/1/94	
GC Column: DB-6	524 X 75M	ID: 0.53	(mm)	Dilution Factor:	1.0	
Soil Extract Volume:		_(uL)		Soil Aliquot Volume:		(uL)
			Concentration	on Units:		
Number TICs found:	0	-	(ug/L or u	ıg/Kg) <u>ug/L</u>		

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	NONE FOUND			Υ
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9428401V	
E111-154	

SAMPLE NO.

Lab Name: EMSL ANA	LYTICAL		Contract:	
Project No.		Site:	Location:	Group:
Matrix: (soil/water)	WATER	_	Lab Sample	ID: 9428401V
Sample wt/vol:	5.0	_(g/mL) ML	Lab File	EID: C4254.D
Level: (low/med)	LOW	_	Date Receive	ed: 10/20/94
% Moisture: not dec.	NA	_	Date Analyz	red: 11/1/94
GC Column: DB-6	24 X 75M	ID: 0.	53 (mm) Dilution Fac	tor: <u>1.0</u>
Soil Extract Volume:		_(uL)	Soil Aliquot Volu	me: (uL)
Number TICs found:	0	_	Concentration Units: (ug/L or ug/Kg) ug/L	

CAS Number	Compound Name	RT	Est. Conc.	Q		
1.	NONE FOUND		1			
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Group:

006

Lab Name:	EMSL ANALYTICAL	Contracti		9428401V	
Lau Name.	ENOU ANALT HOAL		Contract:	Em -104	
Project No.:		Site:	Location:	Group:	

Matrix: (soil/water) WATER Lab Sample ID: 9428401V

5 (g/mL) ML Sample wt/vol: Lab File ID: C4254.D

Level: (low/med) LOW Date Received: 10/20/94

% Moisture: not dec. NA Date Analyzed: 11/1/94

GC Column: DB-624 X 75M ID: 0.53 Dilution Factor: 1.0 (mm)

Soil Aliquot Volume: (uL) Soil Extract Volume: (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/L Q
74-87-3	Chloromethane	. 10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene chloride	6	В
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	ับ .
75-35-4	1,1-Dichloroethene	3	J
75-34-3	1,1-Dichloroethane	92	
540-59-0	1,2-Dichloroethene (total)	51	
67-66-3	Chloroform	5	Ū
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	28	
56-23-5	Carbon tetrachloride	5	U .
75-27-4	Bromodichloromethane	. 5	U
78-87-5	1,2-Dichloropropane	5	Ŭ
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	39	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	. 5	Ŭ
75-25-2	Bromoform	5	Ŭ ·
108-10-1	4-Methyl-2-pentanone	10	Ŭ
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene-	7	
79-34-5	1,1,2,2-Tetrachloroethane	5	Ū
108-88-3	Toluene	5	Ŭ
108-90-7	Chlorobenzene	5	Ü
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	Ū

024

Lab Name: EMSL ANALYTICAL Contract: 9429347V Ew-11A

Marix: (Soil) water) HATEN Lab Sample 1D: 9429347V

 Sample wt/vol:
 0.500 (g/mL) ML
 Lab File ID: C4263.D

 Level: (low/med)
 LOW
 Date Received: 10/31/94

% Moisture: not dec. NA Date Analyzed: 11/2/94

GC Column: DB-624 X 75M 1D: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL

Concentration Units:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	100	U
74-83-9	Bromomethane	100	U
75-01-4	Vinyl chloride	100	- U
75-00-3	Chloroethane	100	U
75-09-2	Methylene chloride	69	B
67-64-1	Acetone	100	Ū
75-15-0	Carbon disulfide	50	
75-35-4	1.1-Dichloroethene	120	
75-34-3	1,1-Dichloroethane	62	
540-59-0	1,2-Dichloroethene (total)	200	
67-66-3	Chloroform	50	U
107-06-2	1.2-Dichloroethane	50	Ū
78-93-3	2-Butanone	100	U
71-55-6	1,1,1-Trichloroethane	530	
56-23-5	Carbon tetrachloride	. 50	Ū
75-27-4	Bromodichloromethane	50	บ
78-87-5	1,2-Dichloropropane	50	U
10061-01-5	cis-1,3-Dichloropropene	50	U
79-01-6	Trichloroethene	180000	
124-48-1	Dibromochloromethane	50	Ū
79-00-5	1,1,2-Trichloroethane	96	
71-43-2	Benzene	50	Ū
10061-02-6	trans-1,3-Dichloropropene	50	U
75-25-2	Bromoform	50	ប
108-10-1	4-Methyl-2-pentanone	100	U
591-78-6	2-Hexanone	100	U
127-18-4	Tetrachloroethene	240	
79-34-5	1,1,2,2-Tetrachloroethane	50	U
108-88-3	Toluene	50	U
108-90-7	Chlorobenzene	50	ប
100-41-4	Ethylbenzene	50	U
100-42-5	Styrene	50	U
1330-20-7	Xylene (total)	50	ប

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VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

9429347V E(v-(/-)

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v	4	U

Lab Name: EMSL ANA	LYTICAL	Con	ntract:	
Project No.		Site: Loc	ation:	Group:
Matrix: (soil/water)	WATER	_	Lab Sample ID: 942	9347V
Sample wt/vol:	0.500	_(g/mL) ML	Lab File ID: C42	.63.D
Level: (low/med)	LOW		Date Received: 10/	31/94
% Moisture: not dec.	NA	_	Date Analyzed: 11	/2/94
GC Column: DB-6	24 X 75M	ID: 0.53 (mm)	Dilution Factor:	1.0
Soil Extract Volume:		_(uL)	Soil Aliquot Volume:	(uL)
Number TICs found:	0		entration Units: g/L or ug/Kg) ug/L	•

d: _	0	(ug/L or ug/Kg) ug/L						
CAS N	umber	Compound Name	RT	Est. Conc.	Q			
1.		NONE FOUND						
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026

Lab Name: EMSL AN	IALYTICAL	Contract:	94293	
Entot III		Contract.	Eui-11	<u>R</u>
Project No.:	Site:	Location:	Group:	
Matrix: (soil/water)	WATER	Lab Sample ID:	9429348V	
Sample wt/vol:	0.500 (g/mL) ML	Lab File ID	: C4276.D	
Level: (low/med)	LOW	Date Received:	10/31/94	
% Moisture: not dec.	<u>NA</u>	Date Analyzed:	11/3/94	
GC Column: DB-624 X	75M ID: 0.53	(mm) Dilution Factor:	1.0	
Soil Extract Volume:	(uL)	Soil Aliquot Volume:		(uL)
		Concentration Units:		,
CAS No.	Compound	(ug/L or ug/Kg) ug/L	Q	
74-87-3	Chloromethane	. 100	U	
74-83-9	Bromomerhane	100	U ·	
75-01-4	Vinyl chloride	100	U	
75-00-3	Chloroethane	100	U	
75-09-2	Methylene chloride	39	J	•
67-64-1	Acetone	100	U	
75-15-0	Carbon disulfide	50	U	
75-35-4	1,1-Dichloroethene	180		
75-34-3	1,1-Dichloroethane	27	J	
540-59-0	1,2-Dichloroethene (total)	140		
67-66-3	Chloroform	50	U	
107-06-2	1,2-Dichloroethane	50	U	
78-93-3	2-Butanone	100	U	
71-55-6	1,1,1-Trichloroethane	940		
56-23-5	Carbon tetrachloride	50	U	
75-27-4	Bromodichloromethane	50	U	
78-87-5	1,2-Dichloropropane	50	Ü	
10061-01-5	cis-1,3-Dichloropropene	50	U	
79-01-6	Trichloroethene	200000		

FORM I VOA

124-48-1

79-00-5

71-43-2

75-25-2

108-10-1

591-78-6

127-18-4

79-34-5 108-88-3

108-90-7

100-41-4

100-42-5

1330-20-7

10061-02-6

Dibromochloromethane

trans-1,3-Dichloropropene

1,1,2,2-Tetrachloroethane

1,1,2-Trichloroethane

4-Methyl-2-pentanone

Tetrachloroethene

Chlorobenzene

Ethylbenzene

Xylene (total)

Benzene

Bromoform

2-Нехапопе

Toluene

Styrene

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VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.	_3 G /*
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94 29348V	
EW-11B	

Lab Name: EMSL ANA	ALYTICAL	Contr	ract:	•
Project No.	,	Site: Locat	ion: Group:	_
Matrix: (soil/water)	WATER	-	Lab Sample ID: 9429348V	
Sample wt/vol:	0.500	(g/mL) ML	Lab File ID: C4276.D	_
Level: (low/med)	LOW	_	Date Received: 10/31/94	
% Moisture: not dec.	NA		Date Analyzed: 11/3/94	
GC Column: DB-6	24 X 75M	ID: 0.53 (mm)	Dilution Factor: 1.0	
Soil Extract Volume:		_(uL)	Soil Aliquot Volume: (uL)	
Number TICs found:	0		uration Units: L or ug/Kg) ug/L	

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	NONE FOUND			
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Sample no.

Soil Aliquot Volume: (uL)

7011

9428418V

Lab Name: EMSL ANA	LYTICAL		Contract:		EW- 134	
Project No.:	Site:		Location:		Group:	
Matrix: (soil/water)	WATER			Lab Sample ID:	9428418V	
Sample wt/vol:	0.500 (g/mL)	ML		Lab File ID:	C4257.D	
Level: (low/med)	LOW	,		Date Received:	10/25/94	
% Moisture: not dec.	NA			Date Analyzed:	11/1/94	
GC Column: DB-624 X 7	5M ID:	0.53 (1	nm)	Dilution Factor:	1.0	

(uL)

Soil Extract Volume:

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	100	U
74-83-9	Bromomethane	100	ប
75-01-4	Vinyl chloride	100	U
75-00-3	Chloroethane	100	U
75-09-2	Methylene chloride	47	JB
67-64-1	Acetone	100	U
75-15-0	Carbon disulfide	23	J.
75-35-4	1,1-Dichloroethene	50	
75-34 - 3	1.1-Dichloroethane	21	J
540-59-0	1.2-Dichloroethene (total)	53	
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U
78-93-3	2-Butanone	100	U
71-55-6	1.1,1-Trichloroethane	270	·
56-23-5	Carbon tetrachloride	50	Ū
75-27-4	Bromodichloromethane	50	ប
78-87-5	1,2-Dichloropropane	50	ับ
10061-01-5	cis-1,3-Dichloropropene	50	U
79-01-6	Trichloroethene	1200	
124-48-1	Dibromochloromethane	50	Ŭ
79-00-5	1,1,2-Trichloroethane	. 50	ប
71-43-2	Benzene	50	Ü
10061-02-6	trans-1,3-Dichloropropene	50	บ
75-25-2	Bromoform	50	U
108-10-1	4-Methyl-2-pentanone	100	ប
591-78-6	2-Hexanone	100	U
127-18-4	Tetrachioroethene	50	Ū
79-34-5	1.1,2,2-Tetrachloroethane	50	U
108-88-3	Toluene	55	
108-90-7	Chlorobenzene	50	Ü
100-41-4	Ethylbenzene	50	ប
100-42-5	Styrene	50	Ū
1330-20-7	Xylene (total)	50	U

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

013

Lab Name: EMSL ANA	LYTICAL		Contract:	
Project No.		Site:	Location:	Group:
Matrix: (soil/water)	WATER	-		Lab Sample ID: 9428418V
Sample wt/vol:	0.500	(g/mL) ML	_	Lab File ID: C4257.D
Level: (low/med)	LOW	_		Date Received: 10/25/94
% Moisture: not dec.	NA	<u></u>		Date Analyzed: 11/1/94
GC Column: DB-6	24 X 75M	ID: 0.53	_(mm)	Dilution Factor: 1.0
Soil Extract Volume:		(uL)		Soil Aliquot Volume: (uL)
			Concentration	on Ilnire.

Number TICs found:

d: <u> </u>	(ug/L or	ug/Kg)	ug/L	
CAS Number	Compound Name	RT	Est. Conc.	Q
l.	NONE FOUND			
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	e and the second second		9428419V
Lab Name:	EMSL ANALYTICAL	Contract:	EW-1313

Project No.: Site: Location: Group:

Matrix: (soil/water) WATER Lab Sample ID: 9428419V

Sample wt/vol: 0.500 (g/mL) ML Lab File ID: C4258.D

Level: (low/med) LOW Date Received: 10/25/94

% Moisture: not dec. NA Date Analyzed: 11/1/94

GC Column: DB-624 X 75M ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	· 100	U
74-83-9	Bromomethane	100	U
75-01-4	Vinyl chloride	100	U
75-00-3	Chloroethane	100	U
75-09-2	Methylene chloride	50	В
67-64-1	Acetone	100	U
75-15-0	Carbon disulfide	50	U
75-35-4	1,1-Dichloroethene	150	
75-34-3	1,1-Dichloroethane	25	1
540-59-0	1,2-Dichloroethene (total)	56	
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U
78-93-3	2-Butanone	100	U
71-55-6	1,1,1-Trichloroethane	580	
56-23-5	Carbon tetrachloride	50	U
75-27-4	Bromodichloromethane	50	U
78-87 <i>-</i> 5	1,2-Dichloropropane	50	U
10061-01-5	cis-1,3-Dichloropropene	50	U
79-01-6	Trichloroethene	2200	
124-48-1	Dibromochloromethane	50	Ü
79-00-5	1,1,2-Trichloroethane	50	ប
71-43-2	Benzene	50	Ū
10061-02-6	trans-1,3-Dichloropropene	50	U
75-25-2	Bromoform	50	ប
108-10-1	4-Methyl-2-pentanone	100	ប
591-78-6	2-Hexanone	100	U
127-18-4	Tetrachloroethene-	50	U
79-34-5	1,1,2,2-Tetrachloroethane	50	U
108-88-3	Toluene	60	
108-90-7	Chlorobenzene	50	U
100-41-4	Ethylbenzene	50	U
100-42-5	Styrene	50	U
1330-20-7	Xylene (total)	50	U

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Saniple no.

9428419V Eut - 13 B 015

Lab Name: EMSL ANA	ALYTICAL		Contract:	···	-
Project No.		Site:	Location:		Group:
Matrix: (soil/water)	WATER	_		Lab Sample ID:	9428419V
Sample wt/vol:	0.500	(g/mL) ML		Lab File ID	: C4258.D
Level: (low/med)	LOW			Date Received:	10/25/94
% Moisture: not dec.	NA	-	•	Date Analyzed:	11/1/94
GC Column: DB-6	524 X 75M	ID: <u>0.53</u>	_(mm)	Dilution Factor:	1.0
Soil Extract Volume:		(uL)	Soi	l Aliquot Volume:	(uL)
Number TICs found:	0	_	Concentration U		-

CAS Number	Compound Name	RT	Est. Conc.	Q ·
1.	NONE FOUND			
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TECHNICAL ASSISTANCE TEAM FOR EMERGENCY RESPONSE REMOVAL AND PREVENTION EPA CONTRACT 68-WO-0036

MEMORANDUM

TO:

Dennis Matlock, OSC, EPA Region III

Eastern Response Section (3HW31) TDD# 9410-0154

PCS# 1154

THRU:

Marian Murphy, TAT Region III MM

FROM:

Elayne Lee, TAT Region III \$ \(\).

SUBJECT: Boarhead Farms Site Analytical Review

DATE:

November 15, 1994

This report covers the analytical review of 14 water samples collected at the Boarhead Farms Site on October 18, 1994 through October 28, 1994. The samples were received at EMSL in Westmont, NJ, on October 20, 25 and 28, 1994, for the analysis of volatile organic compounds. This report is based on a general review of the data provided.

ANALYTICAL METHODOLOGY

The samples were analyzed according to EPA Method 624 for the analysis of the volatile organic compounds. The QC requested consisted of matrix spike/matrix.spike duplicates, method blanks, calibration data, surrogate spikes per sample, GC/MS tune data and internal standards data and raw data.

- The signed copies of the chain-of-custody records for the sampling event were returned.
- The samples were analyzed within the technical holding time.
- The method blank contained 5 ug/L of methylene chloride. Because sample numbers EW-10A, EW-10B, EW-9A, EW-9B, EW-13A, EW-2A, EW-11B, EW-6A, EW-6B contain methylene chloride at a lower concentration than ten times the - concentration found in the blank, the concentration of methylene chloride in these samples should be considered not detected due to blank contamination.
- Surrogate spike percent recoveries were reported for all of the samples. The surrogate spike percent recoveries were within the acceptable ranges.

Roy F. Weston, Inc. **MAJOR PROGRAMS DIVISION**

In Association with Foster Wheeler USA Corporation, Resource Applications, Inc., C.C. Johnson & Malhotra, P.C., R.E. Sarriera Associates, and GRB Environmental Services, Inc.

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- The matrix spike/matrix spike duplicate percent recoveries and the relative percent difference values were acceptable.
- The GC/MS tune data and the internal standards data were acceptable.
- In the initial calibration summary, the value reported for acetone was outside the acceptable limit. Because acetone was not detected in any of the samples, no data was qualified. The rest of the calibration data was acceptable.

CONCLUSION

Accept the data as presented with the following exceptions: The quantities reported for methylene chloride in sample numbers EW-10A, EW-10B, EW-9A, EW-9B, EW-13A, EW-2A, EW-11B, EW-6A and EW-6B_should be considered not detected, due to blank contamination.